

BUILDING SLOPE SOIL DATABASE USING GLOBAL DIGITAL ELEVATION (ASTER GDEM) AND TO PROPOSE EFFECTIVE SOLUTIONS FOR LAND USE IN VAN CHAN DISTRICT, YEN BAI PROVINCE

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Summary

The result of this study showed that slope soil database can be built from global digital elevation (30 m ASTER GDEM), including slope map and its related attributes. Slope map was built at a scale of 1/25.000 with its detailed attributes on area and the number of land plots. The study showed that there were 53.101 plots with an area of 120.737,21 ha, and this study classifies the area into 8 sloping categories. Group I ($<3^{\circ}$) had 8441 plots with an area of 3.718,68 ha, group II ($3^{\circ}-8^{\circ}$) had 10.742 plots with an area of 13.996,45ha, group III ($8^{\circ}-15^{\circ}$) had 8054 plots with an area of 24.974,00ha, group IV ($15^{\circ}-20^{\circ}$) had 6549 plots with an area of 20.594,46 ha, group V ($20^{\circ}-25^{\circ}$) had 5368 plots with an area of 19.909,36 ha, group VI ($25^{\circ} - 30^{\circ}$) had 5256 with an area of 1.526,36 ha, group VII ($30^{\circ} - 35^{\circ}$) had 4896 plots with an area of 667,02 ha, and group VIII ($>35^{\circ}$) had 3795 plots with an area of 610,60 ha. The result of this study will potentially contribute to land use planning, land use classification and long-term land use strategy in Van Chan District, Yen Bai Province.

Keyword: Van Chan, Slope Database, DEM, Vertical Mapper, Global Mapper, ASTER DEM.